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**REMARKS**

Claims 37-49 are now pending in this application, pursuant to the proposed amendment. Claims 1-36 have been cancelled. Further reconsideration of this application is requested.

In response to the objection to the specification under the first paragraph of 35 U.S.C. § 112, the rejection of claims 7, 8, 22-27, 29-31, 33 and 34 under the first paragraph of 35 U.S.C. § 112 as based on a non-enabling disclosure, the rejection of claims 1, 13 and 35 under the first paragraph of 35 U.S.C. § 112 as based on insufficient written description, the rejection of claims 10 and 32 under the first paragraph of 35 U.S.C. § 112 as based on lack of enablement, the rejection of claims 1-36 under the second paragraph of 35 U.S.C. § 112 as being indefinite, the rejection of claim 20 under the second paragraph of 35 U.S.C. § 112 as being incomplete, the rejection of claims 1-3, 7, 8, 10, 11, 13, 14, 17-20, 22-27, 32-34 and 36 under 35 U.S.C. § 102(b) as being anticipated by Erdman, U.S. Patent No. 6,586,747, the rejection of claims 1-5, 7-14, 17-20, 22-28 and 36 under 35 U.S.C. § 102(a) as being anticipated by the admitted prior art, the rejection of claims 1-4, 6-11, 13, 15-20, 22-29 and 32-36 under 35 U.S.C. § 102(b) as being anticipated by Satyamurthy et al., the rejection of claims 6, 16, 29 and 30 under 35 U.S.C. § 103(a) as being obvious over Erdman in view of Satyamurthy et al., and the rejection of claims 6, 16 and 29-31 under 35 U.S.C. § 103(a) as being obvious over the admitted prior art in view of Satyamurthy et al., claims 1-36 have been cancelled in favor of new claims 37-49.

Claims 37-49 have been drafted in light of the Examiner's comments concerning alleged lack of enabling disclosure, lack of sufficient written description, and indefiniteness, and the Examiner's comments regarding the prior art of record. Claims 37-49 are fully supported by the original specification as filed, clearly set forth the subject matter which Applicant regards as the invention, and clearly distinguish over the prior art of record.

In particular, claim 37 sets forth the novel features of the invention as disclosed in Fig. 5. Neither the admitted prior art of Figs. 1-3 nor Erdman nor Satyamurthy et al. disclose the features of a target assembly having a target body; a target chamber formed within said target body, said target chamber having a front window for exposing

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said chamber to a particle accelerator, having a rear wall opposite said front window, said rear wall being sloped with respect to said front window, and having a top wall connecting said rear wall to said front window; and a first cooling channel having a first cooling fluid inlet at one end of said target body, a first cooling fluid outlet at another end of said target body, and a first cooling fluid channel conduit formed in said target body coupling said first cooling fluid inlet with said first cooling fluid outlet, said first cooling fluid channel conduit running along at least a portion of said rear wall and along a portion of said top wall, as set forth in claim 37.

The Erdman assembly includes a target cavity 60 formed in a target body 56. A front window 62 exposes the cavity to accelerated particles 17. A cooling block 68 is inserted into a receiving aperture 66 in the target body 56. A support portion 70 of cooling block 68 has support ribs 72 that engage a rear window 64 of the cavity 60 to form a cooling channel 74 adjacent to the rear window 64. Erdman fails to disclose 1) a target chamber having a front window for exposing said chamber to a particle accelerator and a rear wall opposite said front window being sloped with respect to said front window, and having a top wall connecting said rear wall to said front window; or 2) a first cooling channel having a first cooling fluid inlet at one end of said target body, a first cooling fluid outlet at another end of said target body, and a first cooling fluid channel conduit formed in said target body coupling said first cooling fluid inlet with said first cooling fluid outlet, said first cooling fluid channel conduit running along at least a portion of said rear wall and along a portion of said top wall, as set forth in claim 37.

To the contrary, the cooling channel 74 is located adjacent to only a rear window 64 of the cavity 60. Further, the inlet and outlet ports 76 and 78 are located adjacent to each other on the same surface of cooling block 68. Claim 44 adds the requirement of a second cooling channel conduit, which also is not shown by Erdman.

Similarly, Satyamurthy also fails to disclose a target assembly as set forth in claims 37 or 44. Satyamurthy discloses a cooling water chamber directly behind a target chamber (see Fig. 1).

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**Conclusion**

This amendment is proper and should be entered as it addresses all grounds of rejection and objection without adding any new matter or introducing any new issues that would require any further search or consideration on the part of the Examiner. In view of the foregoing, entry of this amendment, withdrawal of all outstanding grounds of rejection, and the issuance of a Notice of Allowance are earnestly solicited.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Deposit Account No. 19-2179 in the name of Siemens Corporation.

RESPECTFULLY SUBMITTED,					
NAME AND REG. NUMBER	Vincent M. DeLuca Attorney for Applicants Registration No. 32,408				
SIGNATURE	Vincent M De Luca			DATE	8 FEB 06
Address	Novak, Druce, DeLuca & Quigg LLP 1300 I Street, N.W., Suite 400 East Tower				
City	Washington	State	D.C.	Zip Code	20005
Country	U.S.A.	Telephone	202-659-0100	Fax	202-659-0105